

CLASSIFICATION CONFIDENTIAL

CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

COUNTRY USSR

DATE DISTR. 1 Sept 1954

SUBJECT Evaluation of (a) Two Issues of Archives of Pathology; (b) One Issue of Physiological Journal

NO. OF PAGES 5

PLACE ACQUIRED

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NO. OF ENCLS. (LISTED BELOW)

DATE ACQUIRED

SUPPLEMENT TO REPORT NO.

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I. Physiologicheskii Zhurnal SSSR in I M Sechenova. Vol XXXIX, No 6 (November-December 1953)

III. Arkhiv Patologii, Vol XV, Nos 2 and 4 (March-April and July-August 1953)

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1.

Prior to World War II, Soviet medical periodicals were patterned on the German style; that is they were much larger than they are now, and the material in each article was presented in accordance with German practices. Nowadays, however, Soviet journals are strikingly similar to their US counterparts. There has, for example, been a very marked improvement in the quality of the paper used, and the organization and layout of the journals definitely

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show US influence. Apparently a great effort has also been made to improve the quality of the illustrations in Soviet journals, which were formerly always very poor. This effort has not been entirely successful, particularly in the case of x-ray plates.

# 1. - FIZIOLOGICHESKIY ZHURNAL SSSR

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a number of articles concerned with the effects of low barometric pressure and resultant lack of oxygen on the bodies of animals and humans. These articles may be of some interest from the point of view of aviation medicine. In this particular journal is an article by V N Zvorykin. (This name incidentally is a name which was common among the old nobility.)

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In this article the author summarizes his experiments which dealt with the influence of lack of oxygen on the central nervous activity. He concludes that the cerebral cortex under these conditions shows a certain impairment in its function. In particular it shows some weakness in its leading role in the functional unification of the body. As a result, he continues, vegetative reactions also showed many changes under these conditions as well as did behavior patterns and the ability to work. This is true in both men and animals. At the same time the author states that the cerebral cortex may play a certain part in the adjustment of the body to changed conditions of environment; namely, specifically in this case, lack of oxygen.

3. This same question is discussed by I R Petrov in the March-April 1953 issue of Arkhiv Patologii, which will be discussed in further detail below. In his article Petrov furnishes a detailed summary of Soviet scientific contributions concerned with lack of oxygen or hypoxia. He pays particular attention to the adjustment processes and the complex question of hypoxia therapy. He believes that the effects of the oxygen administered may be magnified by the administration of other drugs, especially by narcotics such as urethane or barbiturates. He also believes, however, that vitamins and glucose are valuable in this way. Petrov's article furnishes a rather large bibliography on this general question.
4. To return to the FIZIOLOGICHESKIY ZHURNAL, following the initial article on oxygen deficiency there are a number of specialized articles. Among these the following:

a. Reciprocal or Antagonistic Innervation of the Muscles (L V Donskaya);

b. Reflexory After-Activity of the Nervous Centers of the Spinal Cord (D P Matyushkin);

c. Optimum and Pessimism in Artificial Stimulation of the Isolated Heart (G Ya Priyama);

d. Secretory Activity of the Stomach after Excision of the Solar Plexus (R I Safarov);

e. Biochemical Characteristics of Atrophied Muscles.

these articles appear to describe work which is as good as that done anywhere, including that done in the US.)

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5. Following these articles is a section on Methodology, which contains a lot of short articles concerned with various methodological recommendations. Such highly specialized techniques as the precise registration of the tone of the bronchial muscles and the recording of the movements of the uterus in the dog are covered in this section.
6. Two books are reviewed in the book section of this issue. The first of these is a book by M V Sergiyevskiy entitled THE RESPIRATORY CENTERS OF HIGHER ANIMALS. This book is reviewed by P N Veselkin. This is a rather long review but is unbelievably bad. It reads like Marxist scholasticism. One wonders in reading the review what kind of mistakes Sergiyevskiy made to merit this kind of attack.
7. In contrast, the other review is a very reasonable one. The review is of a book by B V Efimov entitled BIOPHYSICS FOR THE PHYSICIAN. The reviewer is N T Fedorov. The reviewer is critical of the book but understandably so, since he cites a number of very obvious defects in it, such as mistakes in formulae. His criticism is quite understandable to any reader and unlike the preceding review does not involve politics.
8. Toward the end of this particular issue is found a resolution concerning the scientific activities at the Institute of Physiology of Domestic Animals, presumably in Moscow. This resolution is typical Soviet propaganda
9. Finally on page 759 is a report on a conference concerned with the physiology of manual work and sport considered, of course, in the light of Pavlov's theories. Unfortunately the report is very short and presumably the material discussed in it will be published later in extended form, since the material discussed is of some interest. The reporter mentions that there are three phases in any sport, namely: learning, stabilization of achievement, and automatization of activity.

II - ARKHIV PATOLOGII, Vol XV, No 2, March-April 1953

10. In addition to the material on oxygen deficiency discussed above, this particular issue has a number of items which may be of interest. There are for example two articles concerned with the mechanism and treatment of acute hemorrhagic and traumatic shock. The first of these articles is by K A Trofimov; the second, by A V Miller and Z I Burtseva. blood transfusion is widely used in the treatment of this condition and the authors concerned have attempted to compare its effects with those of the transfusion of a number of special fluids, namely, "ferrofusin," "Gel'tsovskiy's fluid," "Petrov's fluid," and "Fedorov's fluid." Unfortunately these fluids are not otherwise identified but they may very well be blood substitutes or blood extenders.
11. In addition to these articles this particular issue consists largely of special articles, including the following:
  - a. Primary Tumors of the Serosa Layers (D I Golovin);
  - b. Changes in the Synaptic Apparatus of the Autonomic Nervous System in Acute and Chronic Diseases (D Yu Guseynov);
  - c. Biochemical Characteristics of the Brain after Clinical Death and after Recovery from This Condition (M I Shuster).

In addition to these there are a number of other articles of this highly specialized nature.

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12. In the historical section of this issue, which begins on page 77, is an article concerned with the activities of the prominent pathologist I. A. Tarasevich, who died 25 years ago. The article was written by N. H. Sirotnin.

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13. At the end of this issue is a short biography of Professor Vyacheslav V. Alyakritskiy. Alyakritskiy is in many ways typical of Soviet scientists of his age.

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This biography is not critical. It is complimentary.

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ISS = ARKHIV DACHOVOSTI, No. 4, July-August 1953

14. This issue starts with an article by V. A. Negovskiy, which is really sort of an editorial. It is a most peculiar article, since certainly Negovskiy's scientific arguments are of considerable interest. Instead of discussing them, however, he gives a very typical Soviet presentation, including the usual quotes from Marx, Engels, Stalin, and the apocryphal Pavlov (as against the actual writings of Pavlov).

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15. Following this is a series of articles covering highly specialized subjects including the following:

a. Repair in Experimental Brain Wounds (I. D. Nasledova); This subject is of course of great interest in the US and in fact some US texts are quoted.

b. Changes in the Heart Nerves in Hypertensive Disease (A. F. Kiseleva); This is a very interesting contribution written by an assistant to Professor Ye. I. Chayka in Kiev.

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c. An article on Glomus Tumors written by a Bulgarian named Asen Prodanov. The author furnishes many citations in the field; he quotes mostly French authors. There are, however, some US references.

d. Pathological Changes in Connective Tissue during Allergic Reactions (A. M. Vukhert). This is of course a very popular topic.

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e. Eosinophilic Granuloma of the Bones (N I Soboleva and A I Ryabinkina).

The Soviets now appear to be doing a great deal of work in this field. In this particular article 11 cases are reported on. This is quite unusual, since the condition is rare.

f. Arteriosclerosis and Age (B I Monastyrskaya). This article arrives at the same conclusions as similar articles in the US.

16. In the review section is a review by A D Speranskiy of a book by K M Bykov and I T Kurtain entitled CORTICAL VISCERAL THEORY OF THE PATHOGENESIS OF THE GASTRIC ULCER. The fact that Speranskiy is reviewing this book is very interesting. During the 1930's Speranskiy was of course the great Soviet leader in the field of pathology. Following World War II, however, he was replaced by Bykov.

In his review Speranskiy tries to compare the common points of his own concepts with those of Bykov.

17. Also in this section is a review of the book REGENERATION OF NERVE AND TROPICAL INFLUENCES By M L Borovskiy. The review is by L I Smirnov

18. In the chronicle section of this issue is another blow to Speranskiy. It is a resolution concerning the activity of Speranskiy's institute in Kiev. The resolution states in part that Speranskiy and his associates are to be congratulated for having "correctly reacted to criticism" and having "mended their ways." A number of recommendations are made to the reader, including one which says that in judging the man, consideration should be paid to the fact that he has made speeches expressing his gratitude toward the Party organization for the help given him in correcting his errors. The final recommendation is that Speranskiy should write a special article about his mistakes.

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